Complete Summary

GUIDELINE TITLE

Preventive services for children and adolescents.

BIBLIOGRAPHIC SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Preventive services for children and adolescents. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2005 Oct. 68 p. [109 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Preventive services for children and adolescents. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2004 Sep. 33 p.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Preventable diseases or conditions such as:

- Infectious diseases such as diphtheria, tetanus, pertussis, poliomyelitis, measles, mumps, rubella, meningitis, hepatitis B, varicella, influenza, pneumococcal pneumonia, hepatitis A
- Cervical cancer
- Injuries due to bicycles and motor vehicles
- Disorders resulting from inborn errors of metabolism
- Alcohol and tobacco use/abuse

- Viral upper respiratory infection (VURI)
- Vision loss
- Obesity

The guideline developers also discuss, but make no specific recommendations for, preventive services related to the following conditions:

- Child maltreatment
- Breast cancer
- Dental and periodontal disease
- Developmental and behavioral disorders
- Hearing loss
- Sudden infant death syndrome (SIDS)
- Injuries due to burn, choking, falls, firearms, poisoning, and water
- Pregnancy
- Sexually transmitted diseases (STDs)
- Skin cancer
- Violence and abuse
- Tuberculosis
- Dyslipidemia

GUIDELINE CATEGORY

Counseling
Evaluation
Prevention
Risk Assessment
Screening

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Obstetrics and Gynecology
Pediatrics
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Health Plans
Hospitals
Managed Care Organizations
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To provide a comprehensive approach to the provision of preventive services, counseling, education, and disease screening for average-risk, asymptomatic children and adolescents
- To assist in the prioritization of counseling needs and opportunities
- To increase awareness and motivation toward healthy behavior
- To increase regular assessment of health risks
- To increase the percentage of high ranked preventive services up-to-date
- To increase the percentage of patients who are up-to-date on preventive services
- To increase the percentage of patients who are up-to-date on immunizations

TARGET POPULATION

Average-risk, asymptomatic individuals from birth to 18 years of age

There are occasional exceptions to this for high-risk populations where noted.

INTERVENTIONS AND PRACTICES CONSIDERED

Prevention

Immunizations, including:

- Diphtheria, tetanus, acellular pertussis (DTaP)
- Tetanus-diphtheria (Td) booster
- Inactivated poliovirus (IPV)
- Measles mumps rubella (MMR)
- Pneumococcal vaccine (PCV7)
- Varicella
- Haemophilus influenzae type b (Hib)
- Hepatitis B vaccine
- Influenza
- Hepatitis A vaccine
- Meningococcal vaccine

Screening

Screening maneuvers, including:

- Cervical cancer screening (Papanicolaou smear)
- Hemoglobin or hematocrit testing
- Neonatal metabolic screening
- Vision testing
- Body mass index (BMI) screening

Counseling

Counseling and education on the following topics:

- Injury prevention: bicycle and motor vehicle
- Alcohol use/abuse

- Tobacco use and cessation
- Viral upper respiratory infection prevention
- Weight management

Additionally, the following preventive services are discussed, but do not have sufficient evidence of effectiveness to warrant a recommendation:

- Screening for and counseling on child maltreatment
- Clinical breast exams
- Counseling about dental and periodontal disease
- Counseling about fluoride supplementation
- Hearing screening
- Counseling about infant sleep position and the prevention of sudden infant death syndrome (SIDS)
- Counseling about injury prevention due to burns, choking, falls, firearms, poisoning, and water
- Nutritional counseling
- Physical activity counseling
- Preconception counseling
- Pregnancy prevention counseling
- Sexually transmitted disease (STD) counseling
- Skin cancer prevention counseling
- Violence and abuse screening counseling

The following preventive services are discussed, but are outside the scope of the guideline for patients with specific identified risks:

- Blood lead testing
- Tuberculin skin test (TST)
- Dyslipidemia (total cholesterol and high-density lipoprotein [HDL] cholesterol) screening
- Sexually transmitted disease testing

MAJOR OUTCOMES CONSIDERED

- Effectiveness of preventive screening
- Effectiveness of preventive counseling and education
- Effectiveness of immunizations
- Predictive value of screening tests

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Key conclusions (as determined by the work group) are supported by a conclusion grading worksheet that summarizes the important studies pertaining to the conclusion. Individual studies are classed according to the system presented below, and are designated as positive, negative, or neutral to reflect the study quality.

Conclusion Grades:

Grade I: The evidence consists of results from studies of strong design for answering the question addressed. The results are both clinically important and consistent with minor exceptions at most. The results are free of any significant doubts about generalizability, bias, and flaws in research design. Studies with negative results have sufficiently large samples to have adequate statistical power.

Grade II: The evidence consists of results from studies of strong design for answering the question addressed, but there is some uncertainty attached to the conclusion because of inconsistencies among the results from the studies or because of minor doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from weaker designs for the question addressed, but the results have been confirmed in separate studies and are consistent with minor exceptions at most.

Grade III: The evidence consists of results from studies of strong design for answering the question addressed, but there is substantial uncertainty attached to the conclusion because of inconsistencies among the results of different studies or because of serious doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from a limited number of studies of weak design for answering the question addressed.

Grade Not Assignable: There is no evidence available that directly supports or refutes the conclusion.

Study Quality Designations:

The quality of the primary research reports and systematic reviews are designated in the following ways on the conclusion grading worksheets:

Positive: indicates that the report or review has clearly addressed issues of inclusion/exclusion, bias, generalizability, and data collection and analysis.

Negative: indicates that these issues (inclusion/exclusion, bias, generalizability, and data collection and analysis) have not been adequately addressed.

Neutral: indicates that the report or review is neither exceptionally strong nor exceptionally weak.

Not Applicable: indicates that the report is not a primary reference or a systematic review and therefore the quality has not been assessed.

Classes of Research Reports:

A. Primary Reports of New Data Collection:

Class A:

- Randomized, controlled trial

Class B:

- Cohort study

Class C:

- Nonrandomized trial with concurrent or historical controls
- Case-control study
- Study of sensitivity and specificity of a diagnostic test
- Population-based descriptive study

Class D:

- Cross-sectional study
- Case series
- Case report

B. Reports that Synthesize or Reflect upon Collections of Primary Reports:

Class M:

- Meta-analysis
- Systematic review
- Decision analysis
- Cost-effectiveness analysis

Class R:

- Consensus statement
- Consensus report
- Narrative review

Class X:

- Medical opinion

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

The guideline developers reviewed published cost analyses.

METHOD OF GUIDELINE VALIDATION

Clinical Validation-Pilot Testing
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Institute Partners: System-Wide Review

The guideline annotation, discussion, and measurement specification documents undergo thorough review. Written comments are solicited from clinical, measurement, and management experts from within the member groups during an eight-week review period.

Each of the Institute's participating member groups determines its own process for distributing the guideline and obtaining feedback. Clinicians are asked to suggest modifications based on their understanding of the clinical literature coupled with their clinical expertise. Representatives from all departments involved in implementation and measurement review the guideline to determine its operational impact. Measurement specifications for selected measures are developed by the Institute for Clinical Systems Improvement (ICSI) in collaboration with participating member groups following implementation of the guideline. The specifications suggest approaches to operationalizing the measure.

Guideline Work Group

Following the completion of the review period, the guideline work group meets 1 to 2 times to review the input received. The original guideline is revised as necessary, and a written response is prepared to address each of the responses received from member groups. Two members of the Preventive Services Steering Committee carefully review the input, the work group responses, and the revised draft of the guideline. They report to the entire committee their assessment of four questions: (1) Is there consensus among all ICSI member groups and hospitals on the content of the guideline document? (2) Has the drafting work group answered all criticisms reasonably from the member groups? (3) Within the knowledge of the appointed reviewer, is the evidence cited in the document current and not out-of-date? (4) Is the document sufficiently similar to the prior edition that a more thorough review (critical review) is not needed by the member group? The committee then either approves the guideline for release as submitted or negotiates changes with the work group representative present at the meeting.

Pilot Test

Member groups may introduce the guideline at pilot sites, providing training to the clinical staff and incorporating it into the organization's scheduling, computer, and other practice systems. Evaluation and assessment occurs throughout the pilot test phase, which usually lasts for three to six months. At the end of the pilot test phase, ICSI staff and the leader of the work group conduct an interview with the member groups participating in the pilot test phase to review their experience and gather comments, suggestions, and implementation tools.

The guideline work group meets to review the pilot sites' experiences and makes the necessary revisions to the guideline, and the Preventive Services Steering Committee reviews the revised guideline and approves it for release.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the National Guideline Clearinghouse (NGC) and the Institute for Clinical Systems Improvement (ICSI): In addition to updating their clinical guidance, ICSI has developed a new format for all guidelines. Key additions and changes include combination of the annotation and discussion section; the addition of "Key Points" at the beginning of most annotations; the inclusion of references supporting the recommendations; and a complete list of references in the Supporting Evidence section of the guideline. For a description of what has changed since the previous version of this guidance, refer to Summary of Changes -- October 2005.

Recommendations for preventive services for children and adolescents are presented in the form of an algorithm with 6 components, accompanied by detailed annotations. An algorithm is provided for Preventive Services for Children and Adolescents. Clinical highlights follow.

Preventive services in this guideline are grouped into three groups, based on their evidence of effectiveness and their priority ranking, as follows:

1. Immunizations, the evidenced-based service warranting a high ranking
2. Services with strong evidence of effectiveness as reviewed by the workgroup
3. Services that address important health issues, but with insufficient evidence of effectiveness to warrant recommendation or ranking or are specific services for at risk groups

Class of evidence (A-D, M, R, X) and conclusion grade (I-III, Not Assignable) definitions are provided at the end of the "Major Recommendations" field.

Prioritization of Preventive Services

	0-2 years	2-6 years	7-12 years	13-18 years
1. Immunizations	X	X	X	X
2. Age appropriate preventive services based on strong evidence				
Cervical Cancer Screening (Papanicolaou Smear)				X
Hemoglobin or Hematocrit	X			
Injury Prevention Counseling: Bicycle		X	X	X
Injury Prevention Counseling: Motor Vehicle	X	X	X	X
Neonatal Metabolic Screening	X			
Substance Abuse Counseling: Alcohol			X	X
Substance Abuse Counseling: Tobacco	X	X	X	X
Viral Upper Respiratory Infection (VURI)	X	X		
Vision Screening	X	X		
Weight Management		X	X	X

3. Preventive services without sufficient evidence of effectiveness to warrant ranking or recommendation
    - Child Maltreatment Counseling
    - Clinical Breast Exam
    - Dental and Periodontal Disease
    - Developmental/Behavioral Assessment
    - Fluoride Supplementation Counseling
    - Hearing Screening
    - Infant Sleep Positioning and sudden infant death syndrome (SIDS)
    - Injury Prevention - Burn
    - Injury Prevention - Choking
    - Injury Prevention - Falls
    - Injury Prevention - Firearms
    - Injury Prevention - Poisoning
    - Injury Prevention - Water
    - Nutritional Counseling
    - Physical Exam
    - Physical Activity Counseling
    - Preconception Counseling
    - Pregnancy Prevention Counseling
    - Sexually Transmitted Disease Counseling

- Skin Cancer Prevention Counseling
- Violence and Abuse Counseling

Preventive services for at-risk populations

- Blood Lead Screening
- Tuberculin Skin Test (TST)
- Dyslipidemia (Total Cholesterol and High-density Lipoprotein [HDL] Cholesterol)
- Sexually Transmitted Diseases Testing

Clinical Highlights

1. All clinic visits, whether acute, chronic, or for traditional preventive service visits are opportunities for prevention. Incorporate appropriate preventive services at every opportunity. (Annotation #3 -- see the original guideline document)
2. Assess patients for risk factors at periodic intervals and for identified risk factors. (Annotation #2)
3. Assess patients for status of immunization at every visit. (Annotation #4)
4. At each visit, provide immunizations, as appropriate. (Annotation #4)
5. At the clinicians discretion, and available time, provide services with strong evidence of effectiveness. (Annotation #5)

Preventive Services for Children and Adolescents Algorithm Annotations

2. Perform Risk Stratification and Health Assessment

   Preventive counseling and education should be emphasized to change health habits before disease develops. Health risk assessment and health education are of greater value to patients than most routine screening tests.

4. Update Routine Immunizations at Every Opportunity

   Routine Immunization Schedule for Infants and Children

Vaccine	Birth	1 mo	2 mos	4 mos	6 mos	12 mos	15 mos	18 mos	24 mos	4-6 yrs	11-12 yrs
DTaP			X	X	X	X				X	Adult Td
IPV			X	X	X					X	
MMR						X				X	
Pneumococcal (PCV7)			X	X	X	X					
Varicella						X					
Hib			X	X	X	X					

Vaccine	Birth	1 mo	2 mos	4 mos	6 mos	12 mos	15 mos	18 mos	24 mos	4-6 yrs	11-12 yrs
Hep B Schedule 1	X	X			X						
Hep B Schedule 2		X		X	X						
Influenza					X					X	

Abbreviations: DTaP, diphtheria, tetanus, acellular pertussis; IPV, inactivated poliovirus vaccine; MMR, measles, mumps, and rubella; Hib, Haemophilus influenzae type b; Hep B, hepatitis B; Td, tetanus-diphtheria toxoid

Special Uses Immunization Schedule

Vaccine	6 mos	12 mos	2 yr	3 yrs	4-6 yrs	13-18 yrs
Pneumococcal	See Annotation #4 in the NGC summary of ICSI guideline Immunizations					
Varicella			Immunize if not previously immunized or no previous history of chicken pox			If no history of chicken pox do titer
Influenza	X (annual)					
Hep A			X (See Annotation #4 in the NGC summary of ICSI guideline Immunizations)			
Meningococcal						X

Recommended Service

Counseling Messages

Educate parents to immunize children according to age appropriate schedule.

References/Related Guidelines:

See the NGC summary of the ICSI Immunizations guideline for current immunization schedules and annotations to the basic schedule above.

5. Initiate Age Appropriate Preventive Services Based on Strong Evidence When Time Permits

Cervical Cancer Screening (Papanicolaou Smear)

Preventive Service

Initially, all women should have annual Pap smear screening beginning at age 21 or three years after first sexual intercourse, whichever is earlier.

After three consecutive normal Pap smears, women may have their screening performed less frequently at the discretion of the clinician and patient. Screening for cervical cancer should be performed every three years.

Efficacy

In the asymptomatic patient, there is no known benefit to performing a pelvic exam as a screening procedure for gynecological disease.

Patients with a history of dysplasia should have Pap smears at least annually until they no longer have a history of dysplasia within the last five years. At this point they need not be repeated more frequently than the standard recommendation.

Counseling Message

Implementing the decrease in frequency of Pap smear screening will require a transitional time of education for patients and physicians and will require clinics to reconsider what should be recommended to women for frequency of preventive health visits. This will be complicated by the need to readdress protocols for contraceptive and hormone refill visits and mammogram scheduling. Hopefully further recommendations will be forthcoming in the literature regarding these issues.

It is important to be aware of the most recent Pap smear screening at the time of visits other than scheduled preventive care, as multiple studies indicate that over 50% of cervical cancers occur in women who have never been screened.

References/Related Guidelines

See the NGC summary of the ICSI guideline Cervical Cancer Screening.

Hemoglobin or Hematocrit

Preventive Service

It is recommended that a hemoglobin or a hematocrit be performed once during infancy, preferably between 6 and 12 months of age. As no additional information is obtained by the performance of both hemoglobin and hematocrit, it is recommended that either of these tests, but not both, be performed.

Hemoglobin screenings requested for asymptomatic older children by schools, camps, or other organizations are unnecessary and should not be performed.

Evidence supporting this recommendation is of class: R

Neonatal Screening

Preventive Service

Metabolic screens and other interventions in the first week of life should be performed according to state law.

Efficacy

Newborn metabolic screening is designed to detect infants with inborn errors of metabolism. Early identification in many cases can avert a poor outcome for a child with various interventions depending on the condition. Approximately 4,000 infants per year are identified with a condition through the newborn metabolic screening program. Each state varies on the test required to be done by law, but a uniform approach with all states using mass spectrometry is being promoted by a variety national groups (www.mchb.hrsa.gov/screening).

Counseling Message

All infants should receive a newborn metabolic screening test prior to hospital discharge, ideally when greater than 24 hours of age. Infants who receive screening before 24 hours of age should receive a repeat test before the 2nd week of age.

System alerts should provide notice of positive results. Appropriate follow-up services must be provided for any child with a positive test.

Injury Prevention: Bicycle

Preventive Service

Ask about helmet use when riding a bicycle.

Efficacy

Data on effectiveness of bicycle helmet safety from two case-controlled studies provide evidence that the risk of head injury among bicyclists is reduced as much as 69 to 80%. Counseling bicyclists to avoid riding near motor vehicle traffic is based on evidence that nearly 95% of bicycle fatalities occur as a result of a collision with a motor vehicle.

Families who were counseled about wearing helmets while biking reported 44% compliance compared to 19% helmet use by families

who did not receive counseling. Other studies have also show a positive effect from counseling.

Community efforts to separate bicyclists from motor vehicle traffic have met with success in preventing bicycle accidents, but the effectiveness of counseling bicyclists to use these routes remains unstudied. Following safety rules is not included in U.S. Preventive Services Task Force, but is felt to be a useful addition to bicycle safety counseling.

Refer to the original guideline document for information on burden of suffering.

Counseling Message

All Individuals

- Reinforce always wearing an approved safety helmet when riding a bicycle.
- To enhance safety, follow safety rules (look carefully for traffic, signal turns, etc.), avoid riding in heavy motor vehicle traffic, wear light colored and reflective clothing, and install a light on your bicycle.

Injury Prevention Counseling: Motor Vehicle

Preventive Service

Ask about the use of car seats, booster seats, and seat belts in the family.

Ask about helmet use in motorcycle riders.

Refer to the original guideline document for information on the efficacy of counseling and burden of suffering from motor vehicle injuries.

Counseling Messages

Age Group - Birth to 9 Years

- Install and use federally approved child safety seats.
- Discuss the fact that infants should face the rear of the vehicle until they are both 1 year of age and 20 lbs, and should not be placed in any seat with an air bag. (Best - middle rear seat).
- All children under 4 years of age must ride in appropriate car seat.
- Discuss the fact that children between 4 to 9 years and weighing less than 80 pounds should be in a belt positioning booster seat.

All Individuals

- Discuss always wearing a safety belt when driving or riding in a car. Discuss the fact that 50% of death and disability from motor vehicle accidents can be prevented when passengers routinely wear seat belts.
- Do not drive or ride in a motor vehicle when the driver is under the influence of alcohol or drugs.
- Discuss the fact that passengers should not ride in cargo areas of any vehicle.
- The safest way to travel is to ensure that EVERYONE in the vehicle is correctly buckled up and that all children under age 13 ride in the back seat.
- For airbag safety, drivers should try to maintain at least 10 inches between themselves and the steering wheel. Front passenger seats should be moved as far back as possible.
- Motorcycle riders should always wear helmets to reduce the risk of head injury.

Substance Abuse: Alcohol Use

Preventive Services

Ask the amount and frequency of alcohol consumed.

Ask if adolescents drive after drinking.

The goal is to identify those with risky or hazardous drinking as well as those who have carried that behavior to the point of meeting criteria for dependence, and then provide a brief intervention.

A brief intervention can be done by having the clinician or (preferably) rooming nurse simply ask about the quantity drunk, using a simple questionnaire with the same questions on it, or using a formal validated screening questionnaire.

Refer to the original guideline document for information on efficacy of counseling on alcohol use.

Counseling Messages

Reinforce do not drink and drive.

Age Group -- 7 to 12 Years

Reinforce alcohol abuse prevention and education.

Age Group -- 13 + Years

- Don't ride with someone who is under the influence of alcohol.
- Prevent others from driving in this condition - "Friends don't let friends drive drunk."
- Reinforce not drinking and driving and the dangers of it.

    - abstinence if driving
    - have a designated driver
- Discuss characteristics of dependency.
- Assess current use of alcohol (by history and/or use of standardized screening questionnaire; see Annotation Appendix E, "Counseling and Education Tools: Problem Drinking" in the original guideline document.
- Advise all females of the harm of alcohol on a fetus and advise them to limit or cease alcohol intake.

Counseling Method

Brief counseling should follow the 5A model (a variation on tobacco intervention guideline):

- Assess current and historical use of alcohol.
- Advise patients to stop drinking.
- Agree on individual goals for reduction or abstinence.
- Assist with motivation, skills, and supports.
- Arrange follow-up support and repeated counseling, including referral if needed.

References/Related Guidelines

See Annotation Appendix E, "CAGE questionnaire" and "AUDIT structured interview" in the original guideline document

Substance Abuse: Tobacco Use

Preventive Service

- Establish tobacco use and secondhand smoke exposure and reassess at every opportunity.
- Offer tobacco cessation services on a regular basis to all patients who use tobacco.
- Tobacco use is the single most preventable cause of death and disease in our society. The key components of successful office tobacco cessation interventions are:
    - Ask about tobacco use and smoke exposure at every opportunity.
    - Advise all users to quit.
    - Assess willingness to make a quit effort.
    - Assist users' willingness to make a quit attempt.
    - Arrange follow-up.

Refer to the original guideline document for information on efficacy of counseling on tobacco use.

Counseling Messages

<u>For infants and children from birth to 10 years old</u>

- If child is exposed to smoke, counsel adult accompanying the child about harmful effect of secondhand smoke and promote a smoke-free household.
- Provide educational and self-help materials.

For children and adolescents aged 10 years and above and the child or adolescent is using tobacco

- Emphasize short-term negative effects of tobacco use.

For children and adolescents aged 10 years and above and the child or adolescent is not using tobacco, but a parent, sibling, or friend is using tobacco

- Counsel child or adolescent and the accompanying adult about the harmful effect of secondhand smoke and promote a smoke-free household.
- Assist patient in developing refusal skills.
- Provide educational and self-help materials.

For All Ages

- Advise tobacco users to quit.
- Assess user's willingness to make a quit attempt.
- Provide counseling depending on readiness-to-quit stage. Provide a motivational intervention if the user is not ready to make a quit effort.
- Assist (in quitting) if ready to make a quit effort. Negotiate a quit date. Counsel to support cessation and build abstinence skills. Offer phone line for more assistance.
- Arrange follow-up to occur soon after the quit date.
- If accompanying parent uses tobacco, encourage parent to quit. If the parent user is interested in quitting, encourage a visit at his or her clinic for more cessation assistance.

References/Related Guidelines

See the NGC summaries of ICSI guidelines Tobacco Use Prevention and Cessation for Adults and Mature Adolescents and Tobacco Use Prevention and Cessation for Infants, Children, and Adolescents.

Viral Upper Respiratory Infection (VURI) Prevention

Service

Use good hand washing technique.

Effectiveness

Convey this message at a well-child visit preferably just before or sometime during the cold and flu season (November through April).

Evidence supporting this recommendation is of classes: A, B, C, D, R

Counseling Messages

Hand washing is the most effective way to prevent the spread of the common cold (VURI). VURI is most contagious at the onset of symptoms and while febrile.

Infants and Toddlers

- Discourage visitors who have an acute illness, a fever, or contagious disease.
- Prevent child with VURI from sharing toys and pacifier with other children.
- Clean these items with soap and hot water as feasible to reduce opportunities for viral transmission.
- Use and teach good hand washing.
- Ask visitors to wash their hands before handing baby.
- Check daycare hand washing and infection control measures.
- Consider daycare options that reduce exposure to other children.
- Encourage and support mothers to continue breast feeding.

References/Related Guidelines

See the NGC summary of the ICSI guideline Viral Upper Respiratory Infection in Adults and Children.

Vision Screening

Preventive Service

Vision screening is recommended for children 4 years old and younger. By age 5, vision screening should be performed in the clinic or school as part of preschool screening.

Refer to the original guideline document for information on vision screening efficacy.

Counseling Messages

Normal objective vision screening performed at schools need not be repeated by clinics for average-risk, asymptomatic children.

Evidence supporting this recommendation is of class: R

Weight Management

Service

Monitor body mass index (BMI)

Refer to the original guideline document for information on efficacy and burden of suffering.

The ICSI guideline Prevention and Management of Obesity (Mature Adolescents and Adults) recommends measuring height, weight, and BMI annually. This guideline also recommends addressing weight maintenance for those with BMI in the normal range (18.5 to 24.9) because a substantial proportion may become overweight in the future.

Preventive Services

- Record head circumference and weight at 0 to 15 months' normal visit schedule.
- Record height, weight, and BMI annually beginning at age 2 as part of normal visit schedule.
- Physicians should follow the 5A's to address weight management/lifestyle changes for weight management.
    - ASK about, and measure height and weight. Implement an office-wide system that ensures that for every patient, preferably on an annual basis, weight is measured, body mass index is calculated, and patient is educated on BMI and risk status.
    - ADVISE to lose weight. In a clear, strong, but sensitive and personalized manner, urge every overweight or obese patient to lose weight.
    - ASSESS readiness to lose weight. Ask every overweight or obese patient if he or she is ready to make a weight loss attempt at this time (e.g., within the next 30 days).
    - ASSIST in weight loss attempt. Help the patient with a weight loss plan.
    - ARRANGE follow-up. Schedule follow-up contact either in person or via telephone.

Resources/Related Guidelines

See the NGC summary of the ICSI guideline Prevention and Management of Obesity (Mature Adolescents and Adults).

Refer to the original guideline document for information on preventive services for at risk patients or services without sufficient evidence of effectiveness to warrant ranking or recommendation, including the following:

- Child maltreatment
- Clinical breast exam
- Dental and periodontal disease
- Developmental/behavioral assessment
- Fluoride supplementation
- Hearing screening

- Infant sleep positioning and sudden infant death syndrome (SIDS)
- Injury prevention: burn
- Injury prevention: choking
- Injury prevention: falls
- Injury prevention: firearm
- Injury prevention counseling: poisoning
- Injury prevention counseling: water safety
- Nutritional counseling
- Physical activity counseling in children and adolescents
- Preconception counseling
- Pregnancy prevention counseling
- Sexually transmitted disease (STD) counseling
- Skin cancer prevention counseling
- Violence and abuse counseling

Please refer to the original guideline document for information on preventive services outside the scope of the guideline for patients with specific identified risks, including the following:

- Blood lead testing
- Tuberculin skin test (TST)
- Dyslipidemia (total cholesterol and high-density lipoprotein [HDL] cholesterol)
- Sexually transmitted disease testing

Definitions:

Classes of Research Reports:

A. Primary Reports of New Data Collection:

Class A:

- Randomized, controlled trial

Class B:

- Cohort study

Class C:

- Nonrandomized trial with concurrent or historical controls
- Case-control study
- Study of sensitivity and specificity of a diagnostic test
- Population-based descriptive study

Class D:

- Cross-sectional study
- Case series

- Case report

B. Reports that Synthesize or Reflect upon Collections of Primary Reports:

Class M:

- Meta-analysis
- Systematic review
- Decision analysis
- Cost-effectiveness analysis

Class R:

- Consensus statement
- Consensus report
- Narrative review

Class X:

- Medical opinion

Conclusion Grades:

Grade I: The evidence consists of results from studies of strong design for answering the question addressed. The results are both clinically important and consistent with minor exceptions at most. The results are free of any significant doubts about generalizability, bias, and flaws in research design. Studies with negative results have sufficiently large samples to have adequate statistical power.

Grade II: The evidence consists of results from studies of strong design for answering the question addressed, but there is some uncertainty attached to the conclusion because of inconsistencies among the results from the studies or because of minor doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from weaker designs for the question addressed, but the results have been confirmed in separate studies and are consistent with minor exceptions at most.

Grade III: The evidence consists of results from studies of strong design for answering the question addressed, but there is substantial uncertainty attached to the conclusion because of inconsistencies among the results of different studies or because of serious doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from a limited number of studies of weak design for answering the question addressed.

Grade Not Assignable: There is no evidence available that directly supports or refutes the conclusion.

CLINICAL ALGORITHM(S)

A detailed and annotated clinical algorithm is provided for Preventive Services for Children and Adolescents.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The guideline contains a bibliography and discussion of the evidence supporting each recommendation. The type of supporting evidence is classified for selected recommendations (see "Major Recommendations").

In addition, key conclusions contained in the Work Group's algorithm are supported by a grading worksheet that summarizes the important studies pertaining to the conclusion. The type and quality of the evidence supporting these key recommendations is graded for each study.

This guideline is a synthesis of recommendations from other Institute for Clinical Systems Improvement (ICSI) guidelines, primary evidence through literature reviews, other professional groups, particularly United States Preventive Services Task Force (USPSTF), and workgroup consensus.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Improved use of a comprehensive approach to the provision of preventive services, counseling, education, and disease screening for average-risk, asymptomatic children and adolescents as demonstrated by:

- Increased regular assessment of health risks
- Increased percentage of high-ranked up-to-date preventive services
- Increased percentage of patients who are up-to-date on preventive services
- Increased percentage of patients who are up-to-date on immunizations

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- This clinical guideline is designed to assist clinicians by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition. A guideline will rarely establish the only approach to a problem.

- This clinical guideline should not be construed as medical advice or medical opinion related to any specific facts or circumstances. Patients are urged to consult a health care professional regarding their own situation and any specific medical questions they may have.
- It is the guideline development group's assumption that this guideline will primarily serve as a guide for medical groups to develop practice systems for their delivery. While individual clinicians are welcome to refer to this guide, the group does not expect that to be common and it certainly is not the best way to provide important services at high rates. Such an achievement clearly requires the establishment of systems that rely on standing orders, task delegation, reminders, and other automatic ways to identify needs and provide the services.
- While there is good evidence that modifying certain behaviors has positive health benefits (unsafe sex, accidents and safety, nutrition, physical activity), there is unfortunately, minimal evidence at present that screening for these conditions or asking about them in the context of a risk assessment, even if followed by advice from a physician or other provider, will result in a change in behavior or positive outcomes. Therefore, this guideline makes:
    - Minimal recommendations for risk assessment to drive counseling for what are largely lifestyle issues
    - Specific recommendation that risk assessment and counseling about lifestyle not be considered suitable parameters for systematic implementation measures
    - Counseling messages for those clinicians who want to provide such counseling or whose patients express an interest in receiving this information
- For much of the traditional physical examination there does not exist good or fair evidence for inclusion in well child visits. In some cases, there is no evidence at all; in others the evidence is conflicting or primarily anecdotal. It is also recognized that changing these elements will be difficult for some providers and some patients. Therefore, the inclusion of specific components is left to the desires of individual medical groups, while encouraging them to focus primarily on the provision of essential services and the elimination of services that are clearly of no overall value.
- There is insufficient evidence to recommend one prevention visit schedule over another in terms of lowering mortality and morbidity, recognizing disability, promoting optimal growth and development, or helping patients achieve longer, more productive lives. Many services can be provided during routine visits. There have been no studies comparing the efficacy of various scheduled frequencies of preventive services visits. Furthermore, little information is available about what patients prefer for preventive visits, although their behavior suggests that a fairly large minority either doesn't believe in the value of existing approaches or cannot afford them. Thus, all existing schedules are attempts to combine various medical opinions with the frequency required for certain preventive services, especially immunizations.
- Evidence is insufficient to warrant ranking or recommendations for a number of preventive services. Refer to the "Major Recommendations" field and the original guideline document for more information.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Once a guideline is approved for general implementation, a medical group can choose to concentrate on the implementation of that guideline. When four or more groups choose the same guideline to implement and they wish to collaborate with others, they may form an action group.

In the action group, each medical group sets specific goals they plan to achieve in improving patient care based on the particular guideline(s). Each medical group shares its experiences and supporting measurement results within the action group. This sharing facilitates a collaborative learning environment. Action group learnings are also documented and shared with interested medical groups within the collaborative.

Currently, action groups may focus on one guideline or a set of guidelines such as hypertension, lipid treatment, and tobacco cessation.

Detailed measurement strategies are presented in the original guideline document to help close the gap between clinical practice and the guideline recommendations. Summaries of the measures are provided in the National Quality Measures Clearinghouse (NQMC).

IMPLEMENTATION TOOLS

Clinical Algorithm
Quality Measures
Resources

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

RELATED NQMC MEASURES

- Preventive services for children and adolescents: percentage of patients who are up-to-date with recommended immunizations.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Preventive services for children and adolescents. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2005 Oct. 68 p. [109 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1995 Jun (revised 2005 Oct)

GUIDELINE DEVELOPER(S)

Institute for Clinical Systems Improvement - Private Nonprofit Organization

GUIDELINE DEVELOPER COMMENT

Organizations participating in the Institute for Clinical Systems Improvement (ICSI): Affiliated Organizations participating in the Institute for Clinical Systems Improvement (ICSI): Affiliated Community Medical Centers, Allina Medical Clinic, Altru Health System, Aspen Medical Group, Avera Health, CentraCare, Columbia Park Medical Group, Community-University Health Care Center, Dakota Clinic, ENT Specialty Care, Fairview Health Services, Family HealthServices Minnesota, Family Practice Medical Center, Gateway Family Health Clinic, Gillette Children's Specialty Healthcare, Grand Itasca Clinic and Hospital, HealthEast Care System, HealthPartners Central Minnesota Clinics, HealthPartners Medical Group and Clinics, Hutchinson Area Health Care, Hutchinson Medical Center, Lakeview Clinic, Mayo Clinic, Mercy Hospital and Health Care Center, MeritCare, Mille Lacs Health System, Minnesota Gastroenterology, Montevideo Clinic, North Clinic, North Memorial Care System, North Suburban Family Physicians, Northwest Family Physicians, Olmsted Medical Center, Park Nicollet Health Services, Pilot City Health Center, Quello Clinic, Ridgeview Medical Center, River Falls Medical Clinic, Saint Mary's/Duluth Clinic Health System, St. Paul Heart Clinic, Sioux Valley Hospitals and Health System, Southside Community Health Services, Stillwater Medical Group, SuperiorHealth Medical Group, University of Minnesota Physicians, Winona Clinic, Ltd., Winona Health

ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; e-mail: icsi.info@icsi.org; Web site: www.icsi.org.

SOURCE(S) OF FUNDING

The following Minnesota health plans provide direct financial support: Blue Cross and Blue Shield of Minnesota, HealthPartners, Medica, Metropolitan Health Plan, PreferredOne, and UCare Minnesota. In-kind support is provided by the Institute for Clinical Systems Improvement's (ICSI) members.

GUIDELINE COMMITTEE

Preventive Services Steering Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Work Group Members: Karla Grenz, MD (Work Group Leader) (Allina Medical Clinic) (Family Practice); Gaither Bynum, MD (Sioux Valley Hospitals and Health System) (Family Practice); Don Pine, MD (Park Nicollet Health Services) (Family Practice); Leif Solberg, MD (HealthPartners Medical Group) (Family Practice); John M. Wilkinson, MD (Mayo Clinic) (Family Practice); Peter Rothe, MD (HealthPartners Medical Group) (Internal Medicine); Martha Millman, MD (Mayo Clinic) (Internal Medicine); Amy Hentges, MD (Columbia Park Medical Group) (Pediatrics); Anne Kern, MD (Allina Medical Clinic) (Obstetrics/Gynecology); Michael Maciosek, PhD (HealthPartners Medical Group) (Research); Lisa Harvey (Park Nicollet Health Services) (Health Education); Jacquelyn Bartz, MS, RD, CD (Mayo Clinic) (Dietitian); Penny Fredrickson (Institute for Clinical Systems Improvement) (Measurement and Implementation Advisor); Brent Metfessel, MD, MPH (Institute for Clinical Systems Improvement) (Evidence Analyst); Pam Pietruszewski, MA (Institute for Clinical Systems Improvement) (Facilitator); Heidi Groven, RN (Institute for Clinical Systems Improvement) (Facilitator)

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

In the interest of full disclosure, Institute for Clinical Systems Improvement (ICSI) has adopted the policy of revealing relationships work group members have with companies that sell products or services that are relevant to this guideline topic. The reader should not assume that these financial interests will have an adverse impact on the content of the guideline, but they are noted here to fully inform users. Readers of the guideline may assume that only work group members listed below have potential conflicts of interest to disclose.

No work group members have potential conflicts of interest to disclose.

Gaither Bynum, MD, John Butler, MD, and Mike Maciosek, PhD have not returned disclosure information.

ICSI's conflict of interest policy and procedures are available for review on ICSI's website at www.icsi.org.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Preventive services for children and adolescents. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2004 Sep. 33 p.

GUIDELINE AVAILABILITY

Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.

Print copies: Available from ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; Web site: www.icsi.org; e-mail: icsi.info@icsi.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Preventive services for children and adolescents. Executive summary. Bloomington (MN): Institute for Clinical Systems Improvement, 2005 Oct. 1 p. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- Body mass index-for-age percentiles. Annotation appendix C in the original guideline document. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- Counseling and education tools: sexual practices. Annotation appendix D in the original guideline document. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- Counseling and education tools: problem drinking. Annotation appendix E in the original guideline document. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- ICSI pocket guidelines. May 2005 edition. Bloomington (MN): Institute for Clinical Systems Improvement, 2005. 362 p.

Print copies: Available from ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; Web site: www.icsi.org; e-mail: icsi.info@icsi.org.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on July 10, 2000. The information was verified by the guideline developer on April 25, 2001. This summary was updated by ECRI on April 15, 2002 and most recently on March 14, 2003. The updated information was verified by the guideline developer on May 15, 2003. This summary was updated again by ECRI on March 22, 2004, November 10, 2004, December 7, 2004, and December 29, 2005.

COPYRIGHT STATEMENT

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at http://www.guideline.gov/about/inclusion.aspx.

NGC, AHRQ, and its contractor ECRI make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

Date Modified: 9/25/2006